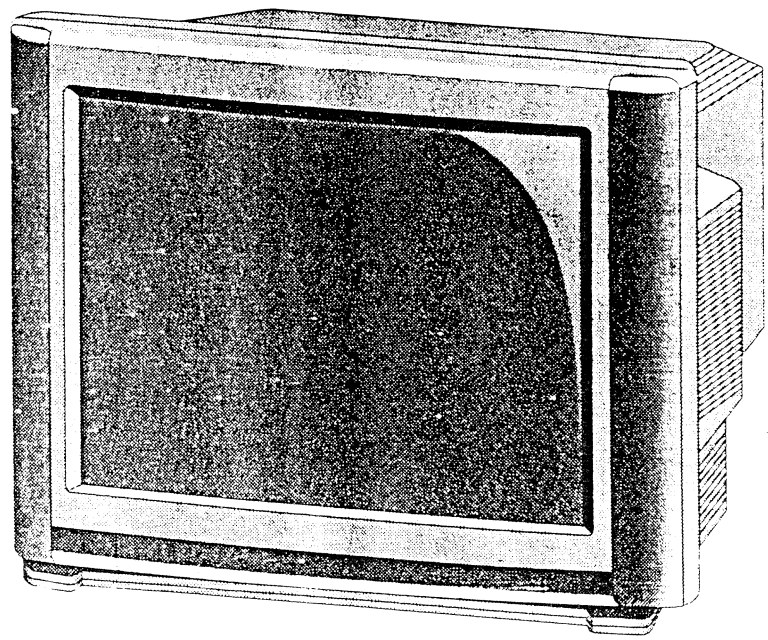
Amstrad



CTV 2111

21" COLOUR TV

SERVICE MANUAL

ALIGNMENT INSTRUCTIONS

Test Equipment: VIF Sweep Generator; SIF Sweep Generator; Colour Bar/Dot/Cross Hatch Generator; DC Power Supply (14V); Oscilloscope; Vacuum Tube Voltmeter; Volt Ohmmeter; High Voltage Meter; Ampere Meter (0.5 Class, DC 3mA Max.) Demagnetizing Coil; Philips Pattern Generator; Frequency Counter; Continuous Waveform Generator.

STEP	FUNCTION	SIGNAL IN	SIGNAL OUT	METHOD	REMARKS
1).	Tank Coil Adjust.	VIF Signal Sweep Generator.	Oscilloscope TP103 & Earth.	(i) Connect VIF Signal Sweep Generator between tuner IF output and earth. (ii) Connect TP108 to earth. (iii) Adjust AGC bias voltage for maximum amplitude of waveform and increase the output level of sweep Generator in 30 dBμV. (iv) Adjust T104 to obtain response cause at 32.7 MHz. (See Fig.3) (v) Connect DC 12V from TP102 and make sure the output waveform (See Fig.4)	(i) Connect DC 14V to ⊕ lead of D412 and GND. (ii) Refe Fig.1 and Fig.2.
2).	AFC Adjustment.	VIF Signal Sweep Generator.	Oscilloscope TP104 & Earth.	(i) Connect VIF Signal Sweep Generator between tuner IF output and earth. (ii) Connect TP108 to earth and connect DC 12V to TP102. (iii) Set the preset switch S604 to 'OFF' position. (iv) Adjust the output level of Sweep Generator in 30–40 dB. And adjust AGC bias voltage to achieve 8Vp-p output (on Oscilloscope). (v) Adjust T105 make the picture carrier 37.3 MHz is centered as in Fig.6. (vi) Remove DC 12V from TP102, adjust CT102 make the picture carrier 32.7 MHz is centered as in Fig.7.	(i) Connect DC 14V to ⊕ lead of D412 and earth. (ii) Refer Fig.1 and Fig. 5. (iii) Make sure polarity of waveform should be same as Fig.6 and Fig.7. (iv) AFTER adjustment short the soldering Pad of ⊕ lead of C112.
3).	PAL SIF Adjustment.	SIF Sweep Generator.	Oscilloscope TP109 & Earth.	(i) Connect SIF Sweep Generator between TP103 and earth. (ii) Connect TP107 and earth. (iii) Connect TP108 and earth. (iv) Adjust output of Sweep Generator to achieve 5Vp-p between markers of 100 KHz. (v) Adjust T102 so that sound carrier is centered as in Fig.9 and confirm the waveform as in Fig.9. NOTE : INPUT. LEVEL : 90 dB.	(i) Connect DC 14V to ⊕ lead of D412 and earth. (ii) Refer Fig.8.
4).	Secam SIF Adjustment.	VIF Sweep Generator.	Oscilloscope TP109 & Earth.	(I) Connect VIF Sweep Generator between tuner IF output and earth. (ii) Adjust AGC for achieve 5Vp-p output (on Oscilloscope). (iii) Adjust T101 and T103 to obtain the waveform as in Fig.12.	(i) Connect DC 14V to ⊕ lead of D412 and earth. (ii) Refer Fig.10 and Fig.11.
5).	B+ Adjustment.	Power On.	Voltage Meter TP403 & Earth.	(i) Connect the voltage meter between TP403 and earth. (ii) Adjust VR901 to read 107V.	
6).	Horizontal Circuit Adjustment.	TV Trans.	Screen.	(i) Receive Monoscope Pattern. Input signal 80dBμV. (ii) IC302 (PIN 28,29) short by 1K Ohm resistor. (iii) Adjust VR302 to obtain the picture running at center. (iv) Remove the 1K ohm resistor.	
7).	Vertical Circuit Adjustment.	TV Trans.	Screen	(i) Set the TV in AV Mode. (ii) Connect the frequency conuter between V-Deflection York and earth. (iii) Adjust Sub-V-Hold (VR303) to the reading 44 Hz. (iv) Receive Monoscope Pattern. (v) Adjust V-size (VR401) control to obtain a normal picture.	
8).	Colour Demodulator Alignment, Delay Line Alignment.	Signal Generator.	Screen.	(i) SECAM/PAL switch S601 set position on PAL. (ii) Receive Philips Pattern. (iii) Set Contrast control to minimum position. (iv) Set Colour control to maximum position. (v) Connect Oscilloscope to TP304 (B-Out). (vi) Adjust CT301 to obtain the waveform as in Fig.13. (vii) Adjust VR306 to obtain the waveform as in Fig.13. (viii) Adjust T303 to obtain the waveform as in Fig.13.	

STEP	FUNCTION	SIGNAL IN	SIGNAL OUT	METHOD	REMARKS
9).	Chock Filter Alignment.	Signal Generator.	Screen.	(i) SECAM/PAL switch S601 set position on SECAM. (ii) Connect Oscilloscope to IC301 Pin 4 through a resistor 5K6 Ohm. (iii) Receive colour bar signal. (iv) Adjust T302 to obtain the waveform as same as Fig.4.	
10).	SECAM Chroma Adjustment.	Signal Generator.	Screen.	(i) SECAM/PAL switch S601 set postion on SECAM. (ii) Connect Oscilloscope to TP306 and earth. (iii) Receive SECAM dot signal. (iv) Set VR305 to middle position. (v) Adjust T301 to obtain the waveform as in Fig.15. (vi) Fine adjust VR305 to obtain the waveform as in Fig.16.	
11).	White Balance Adjustmen.	Signal Generator.	Screen.	(i) Receive a black and white picture signal. (ii) Turn the green, blue and red LOW LIGHT (VR501, VR502, VR503) controls to middle position and turn the DRIVE (VR504, VR505) controls to middle position. (iii) Turn the screen control on the FBT to minimum position. (iv) Set the Sub-Brightness (VR301) control to a quarter of minimum position (Fig.17), then set the Contrast, Brightness and Colour control to minimum. (v) Set the TV in AV mode and the service switch (S301) to 'SERVICE' position. (vi) Slowly turn the screen control to the point where a horizontal line just illuminates. (vii) Adjust VR501 to get a red horizontal line on C.R.T. (viii) Adjust VR502 to get a yellow horizontal ine on C.R.T. (ix) Adjust VR503 to get a white horizontal line on C.R.T. (x) Reset the service switch (S301) to normal position and back to the TV mode. (xi) Adjust Drive (VR504, VR505) controls to obtain a uniform white picture.	
12).	Focus Adjustment	Signal Generator.	Screen.	(i) Set Contrast control to maximum position and Brithtness control to middle position. (ii) Adjust Focus control (on the FBT) to obtain a sharpest and clearest picture on the C.R.T.	
13).	RF AGC Alignment.	Signal Generator.	Screen.	(i) Receive the signal of Band-III (VHF-H) channel and set the AFC to switch to 'ON' position. (ii) Set the input field strength in 62 ± 3 dB. (iii) Adjust RF AGC (VR101) control to the point where noise in disappeared.	
14).	Sub-Brightness Adjustment.	Signal Generator.	Screen.	(i) Receive Monoscope Pattern. (ii) Set Brightness control at 6 indication bar. Set Contrast control at 8 indication bar. And set the Colour control to min. position. (iii) Adjust Sub-Brightness (VR301) to get eight step of the grey scale just illumicate in Monoscope Pattern.	
15).	ON SCREEN Adjustment.	Signal Generator.	Screen.	(i) Receive the Monoscope Pattern. (ii) Adjust ON Screen (VR602) for adjust the lettering to center of C.R.T.	

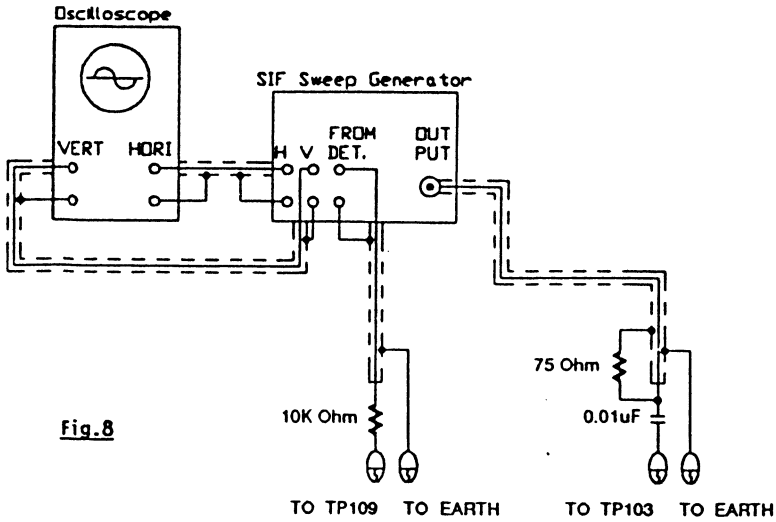
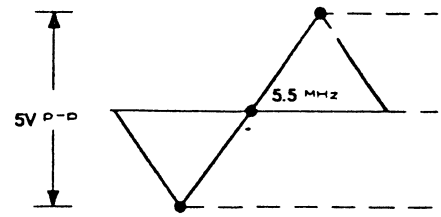


Fig.8

Fig.9



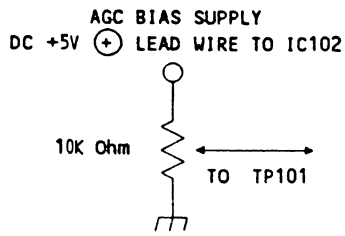


Fig.11

Fig.10

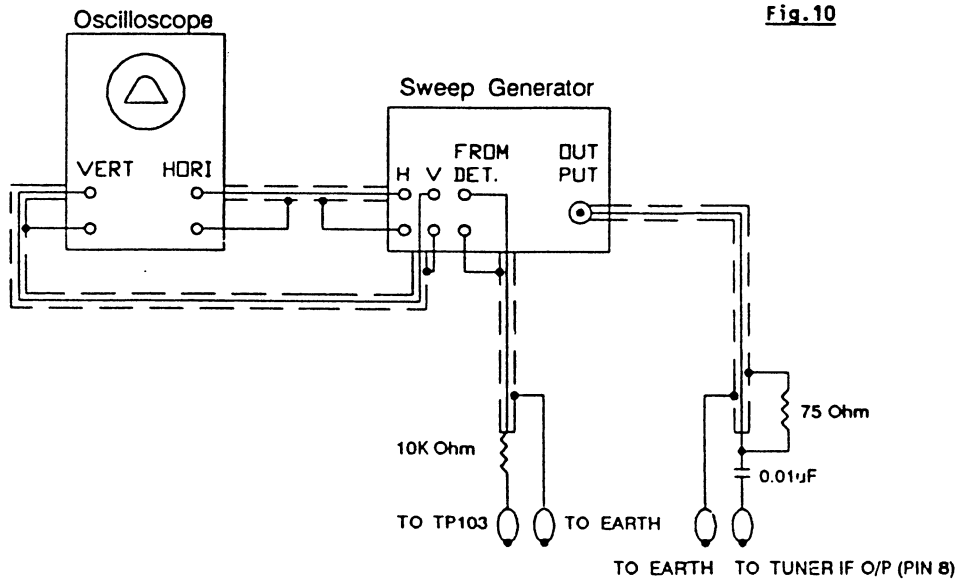


Fig.12

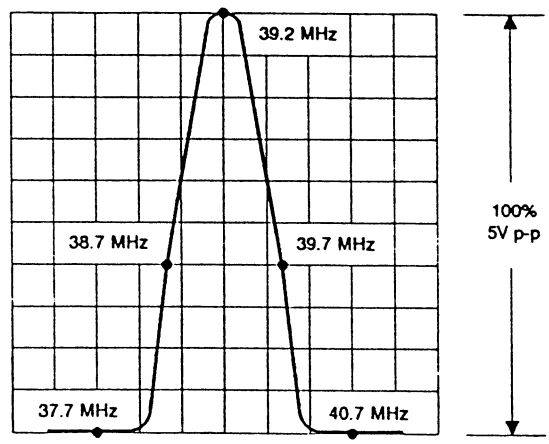


Fig.13

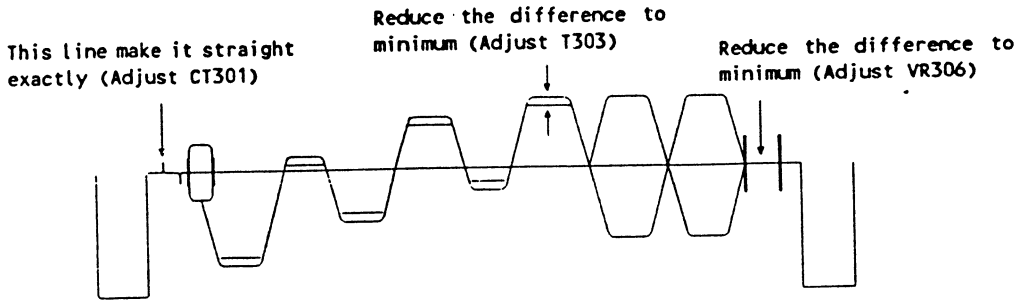


Fig.14

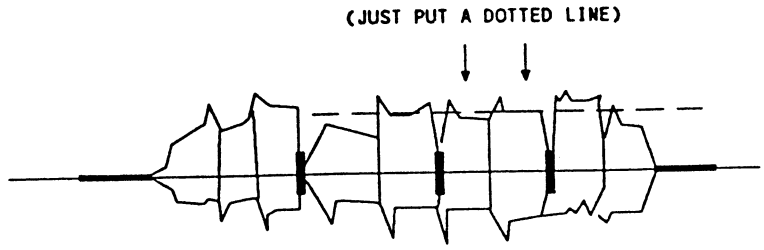


Fig.15

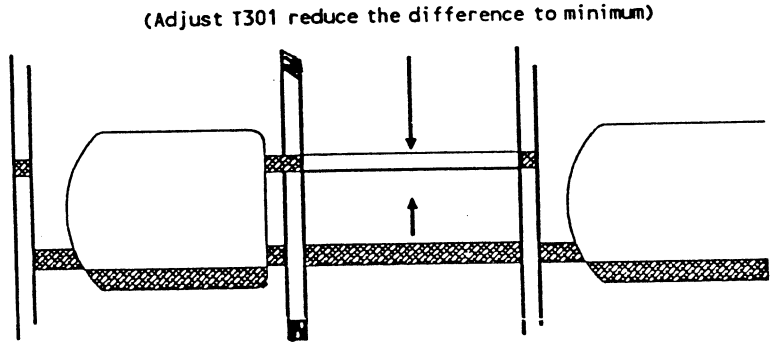


Fig.16

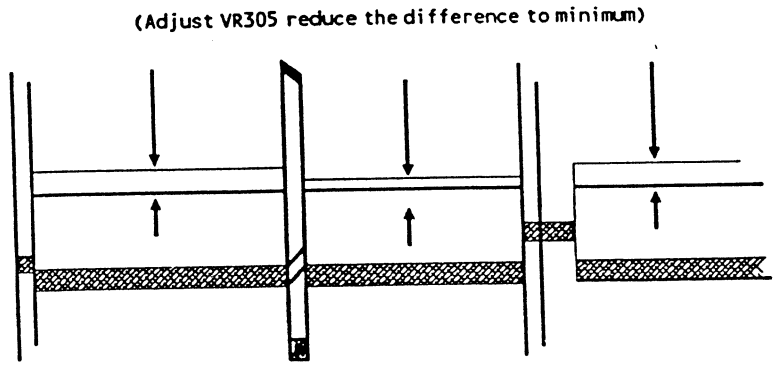
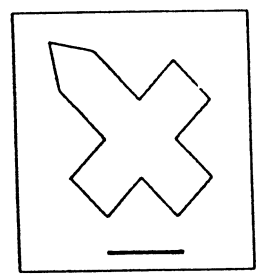


Fig.17



XVI. COLOUR PURITY ADJUSTMENT (SEE FIG.18)

BEFORE ALL ADJUSTMENT DESCRIBED BELOW ARE ATTEMPTED, V-HOLD, H-HOLD, V-HIGH, B+ VOLTAGE AND FOCUSING ADJUSTMENT MUST BE COMPLETED.

1. Place the TV receiver facing NORTH or SOUTH.
2. Plug in TV receiver and turn in on.
3. Operate the TV receiver over 30 minutes.
4. Fully degauss the TV receiver by using an external degaussing coil.
5. Receive a crosshatch pattern and adjust the static convergence, control roughly.
6. Loosen the clamp screw of the deflection yoke and pull the deflection yoke towards you.
7. Fully turn the red and blue Drive (VR504, VR505) controls counter-clockwise.
8. Adjust the purity magnets so that green field is obtained at the center of the screen.
9. Slowly push the deflection yoke towards bell of CRT and set it where a uniform green field is obtained.
10. Tighteen the clamp screw of the deflection yoke.

XVII. CONVERGENCE ADJUSTMENT (SEE FIG.18)

1. Receive a dotted pattern.
2. Unfix the convergence magnet clamper and align red with blue dots at the center of the screen by rotating (R,B) static convergence magnets.
3. Align Red/Blue with green dots at the center of the screen by rotating (RB-G) static convergence magnet.
4. Fix the convergence magnets by turning the clamper.
5. Remove the DY wedges and slightly tilt the deflection yoke horizontally and vertically to obtain the good overall covergence.
6. Fix the deflection yoke by wedges.
7. If purity error is found, follow "PURITY ADJUSTMENT" instructions.

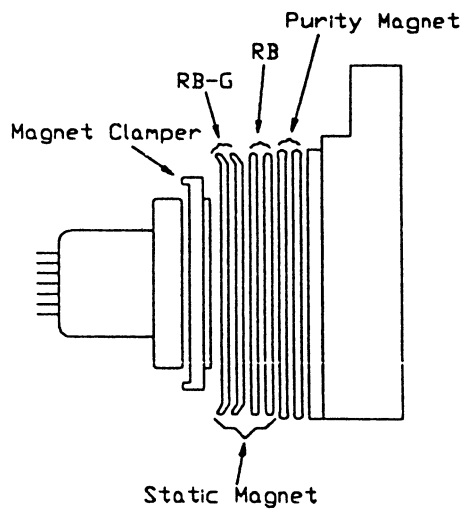
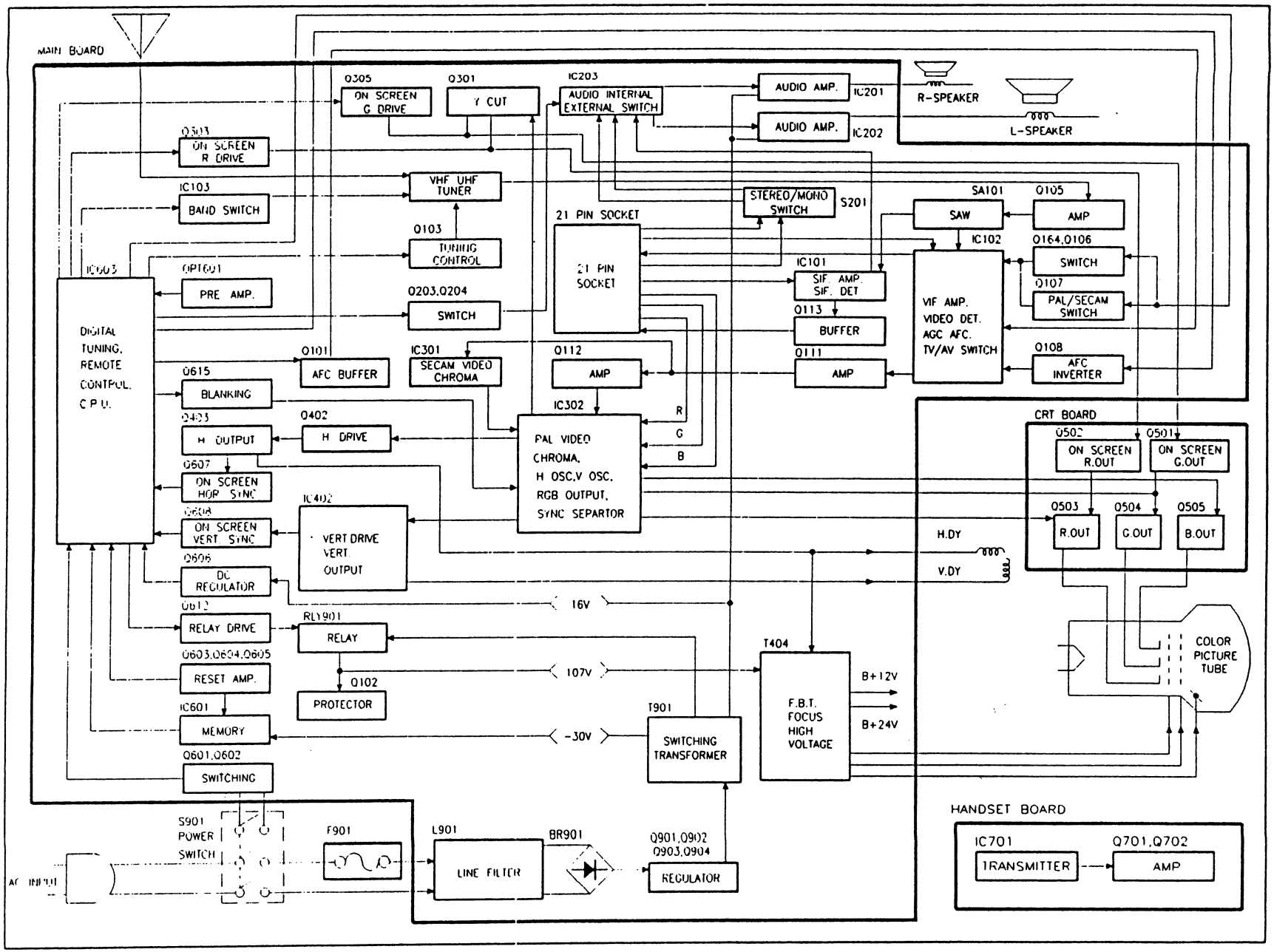
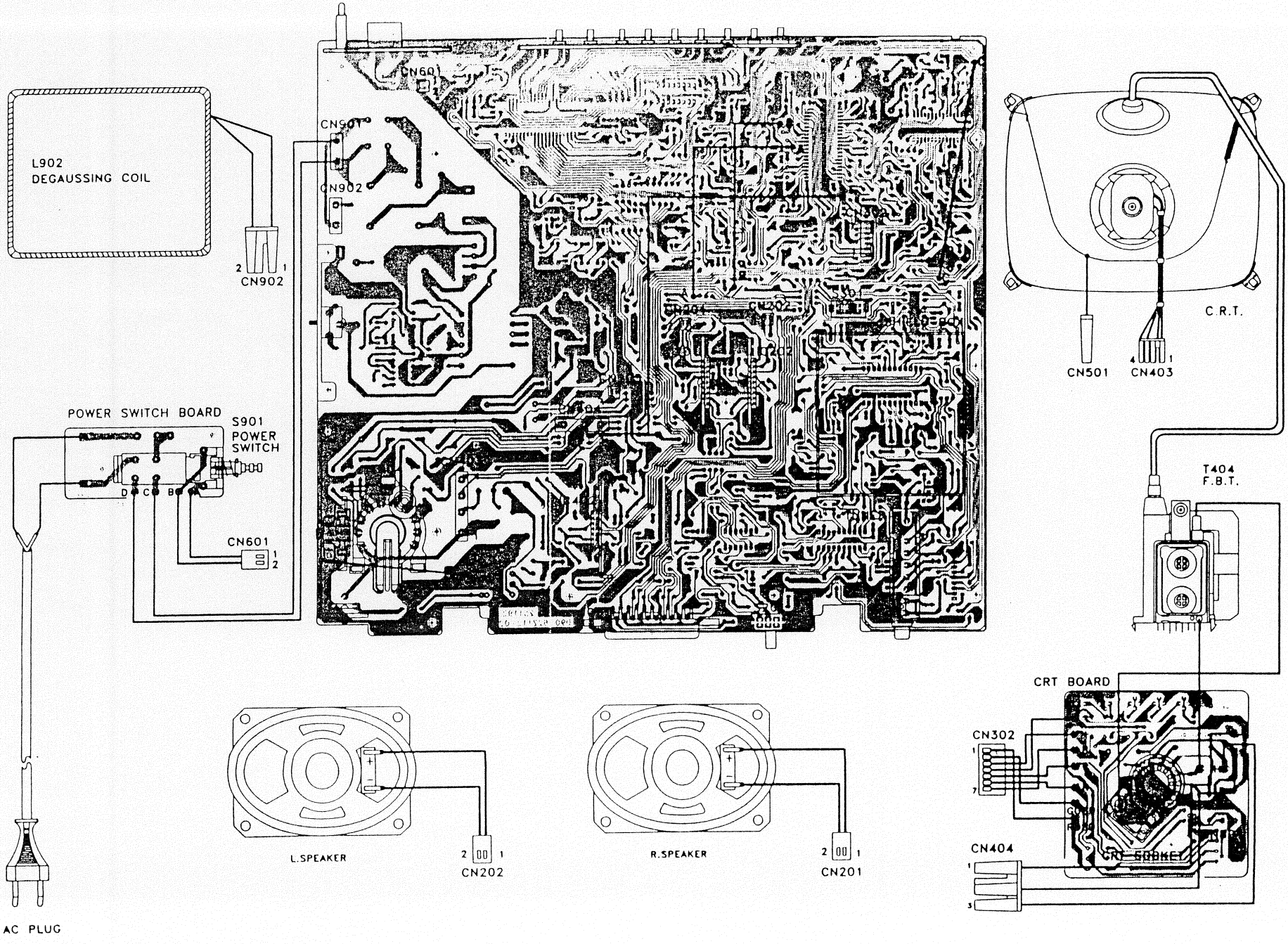


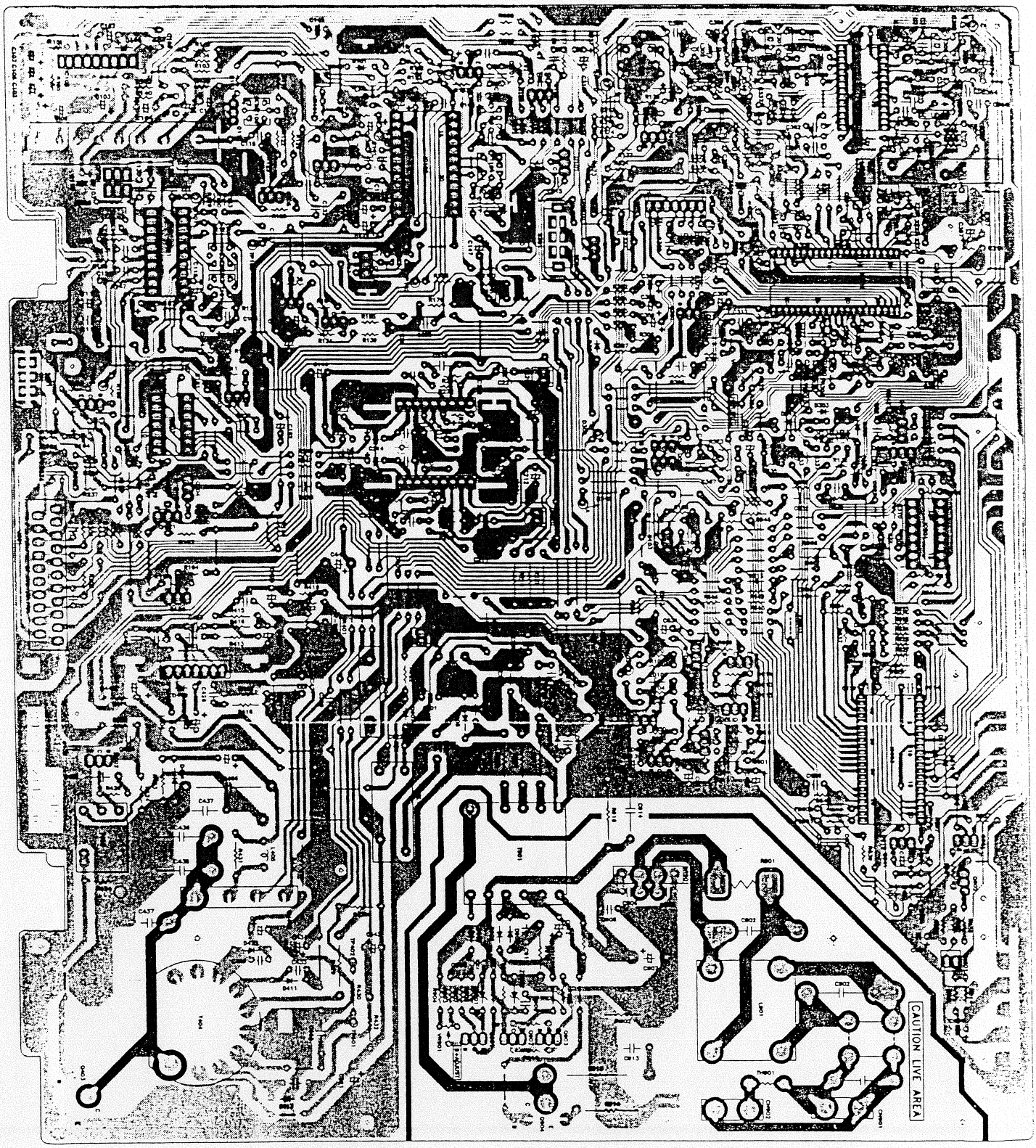
Fig.18

BLOCK DIAGRAM



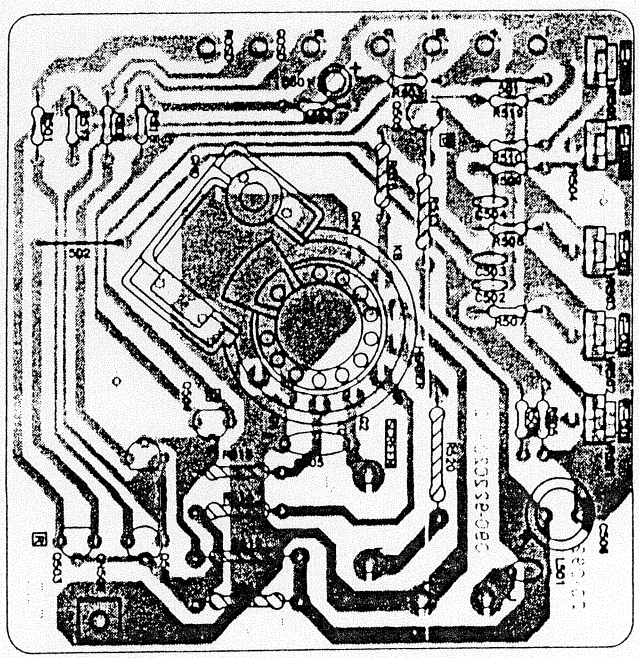

L902
DEGAUSSING COIL
CN902
CN901
CN902
CN601
POWER SWITCH BOARD
S901
POWER
SWITCH
D C B
CN601
AC PLUG
L.SPEAKER
CN202
R.SPEAKER
CN201
C.R.T.
CN501
CN403
T404
F.B.T.
CRT BOARD
CN302
CN404
CRT SOCKET

MAIN P.C.B. Bottom View

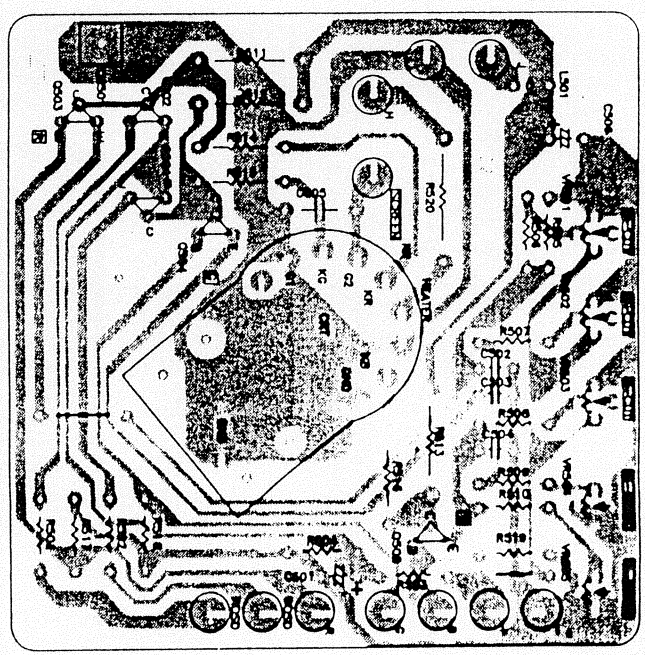


CRT P.C.B.

Top View

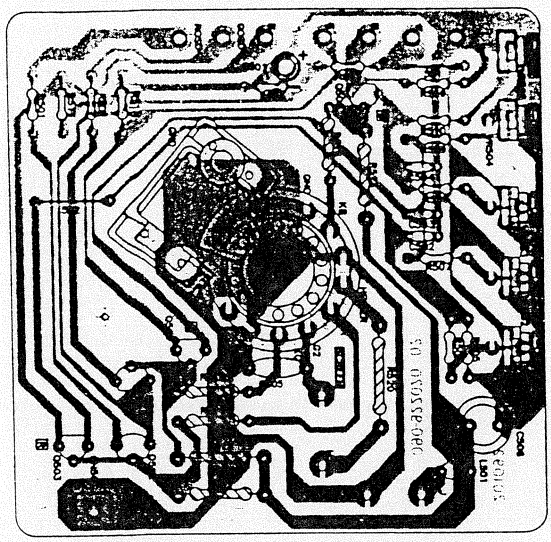


Bottom View

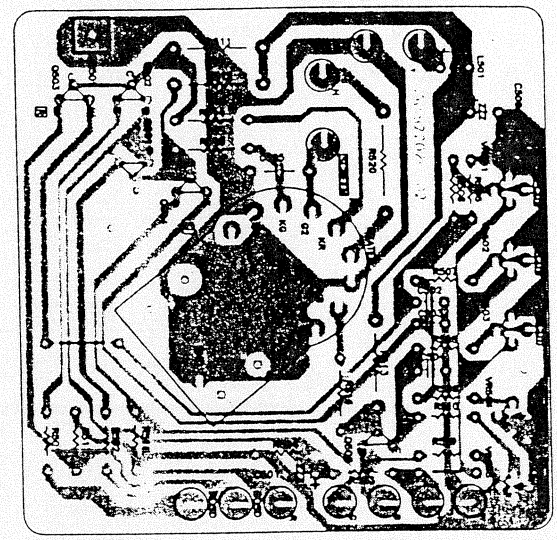


CRT P.C.B.

Top View

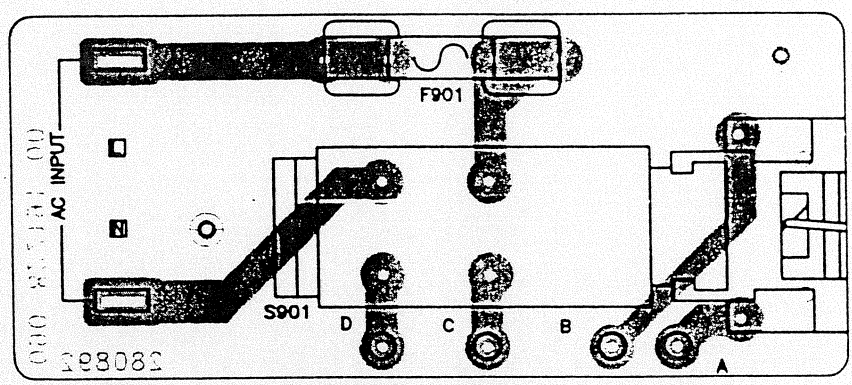


Bottom View

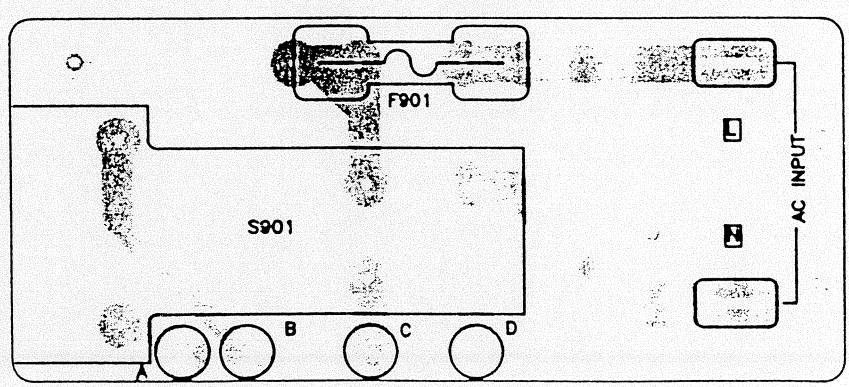


POWER SWITCH P.C.B.

Top View

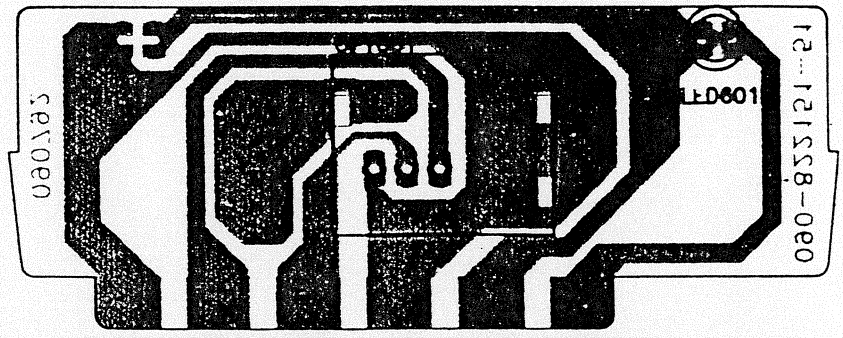


Bottom View

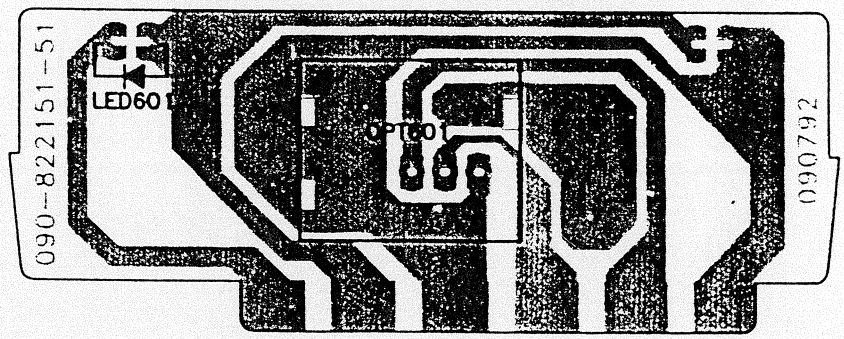


LED P.C.B.

Top View

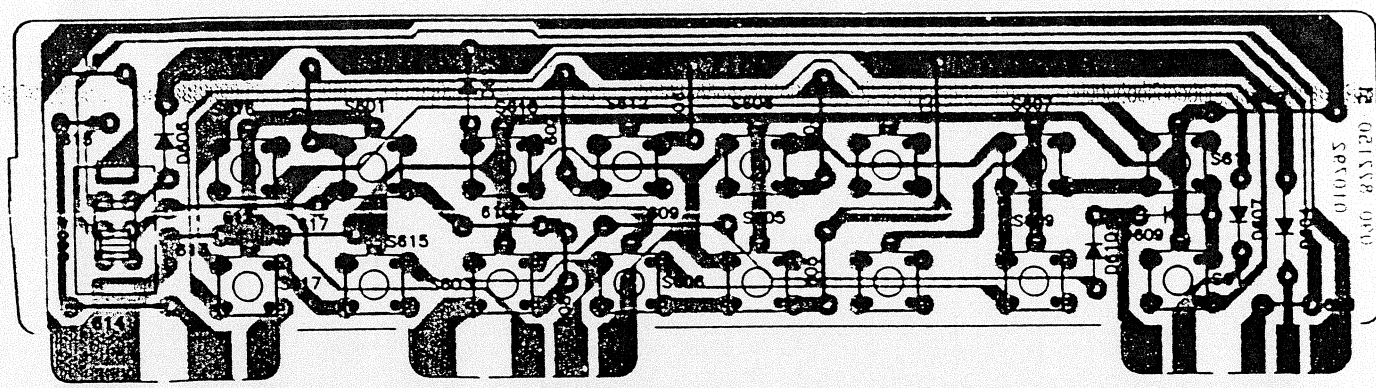


Bottom View

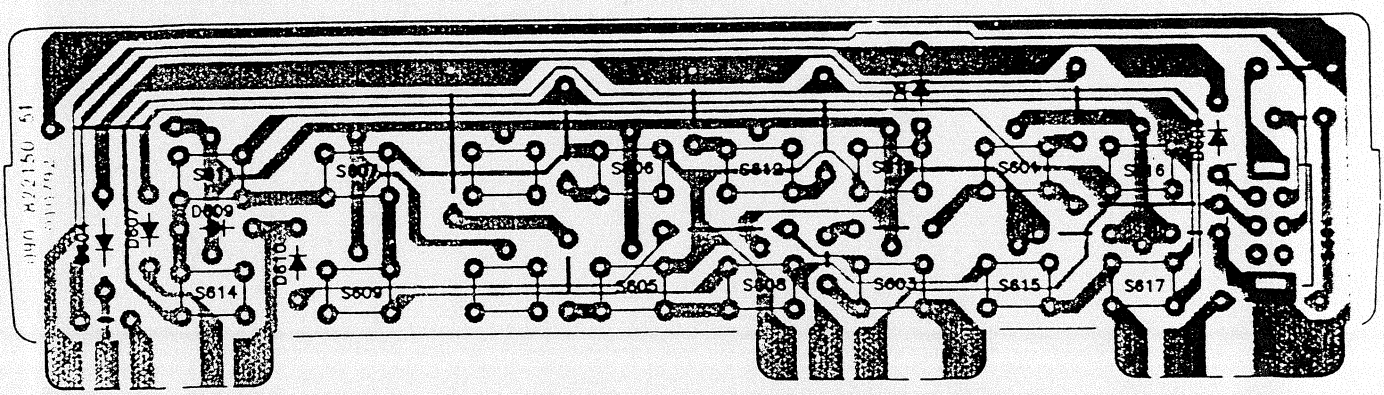


FUNCTION P.C.B.

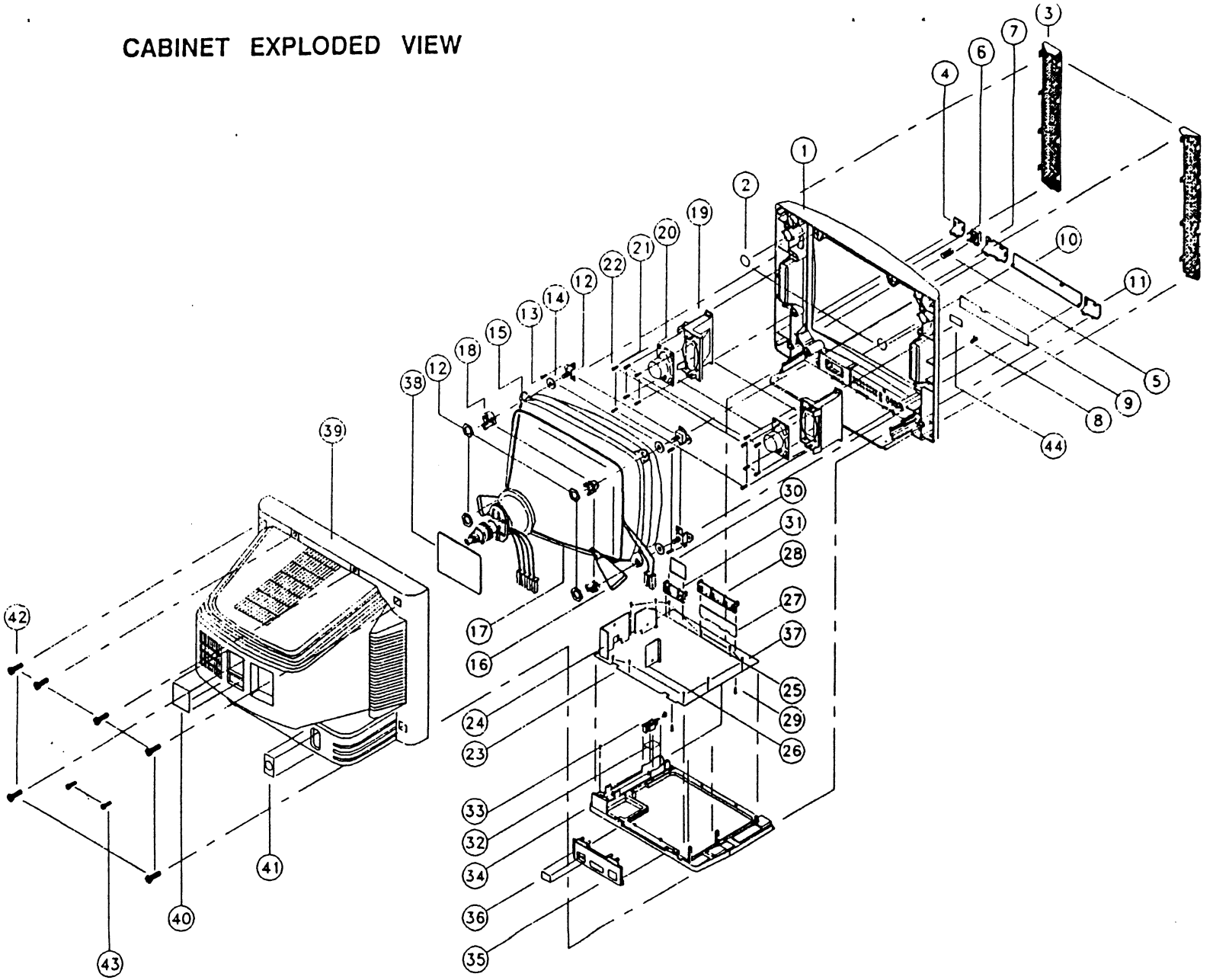
Top View



Bottom View

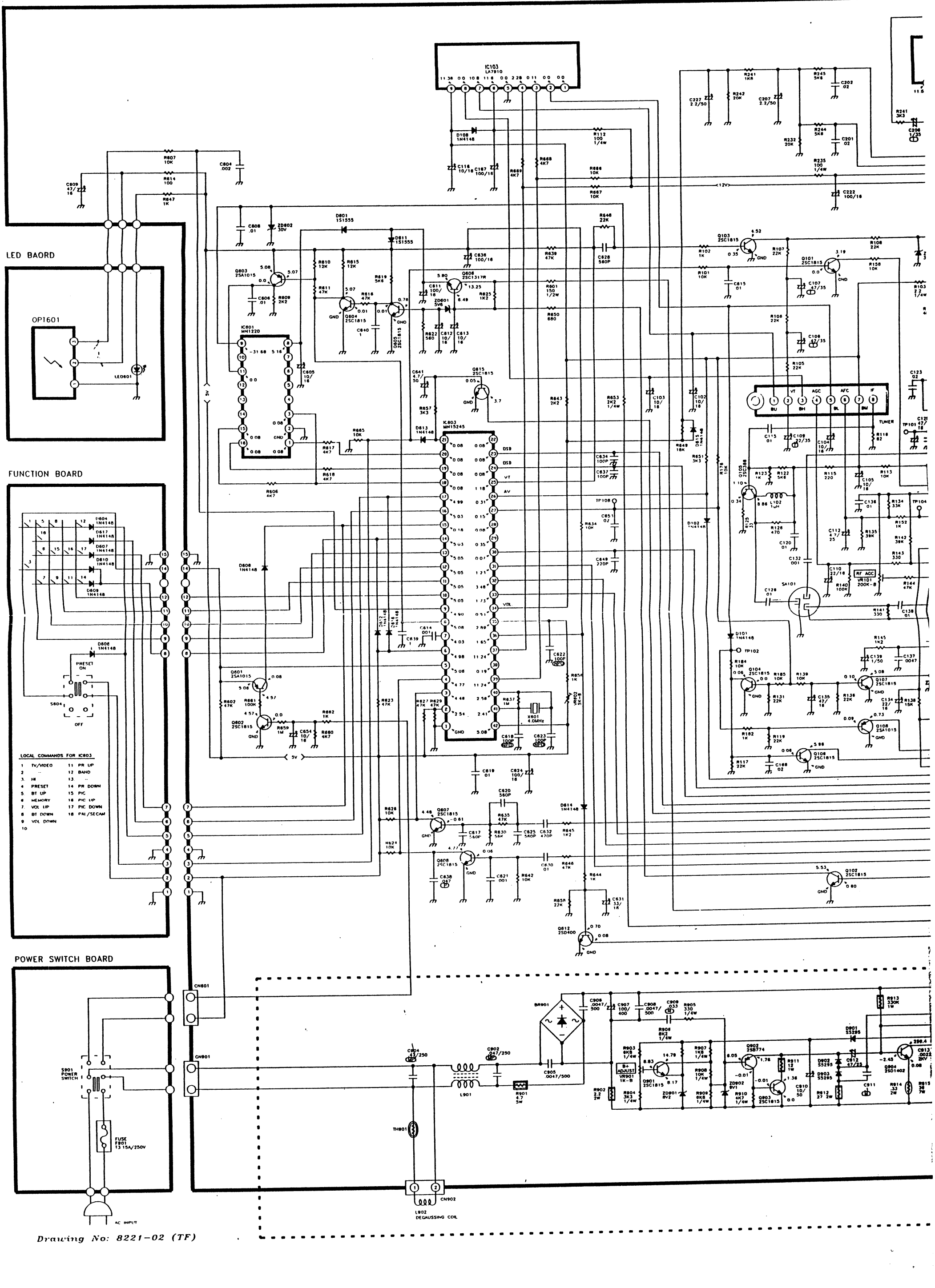


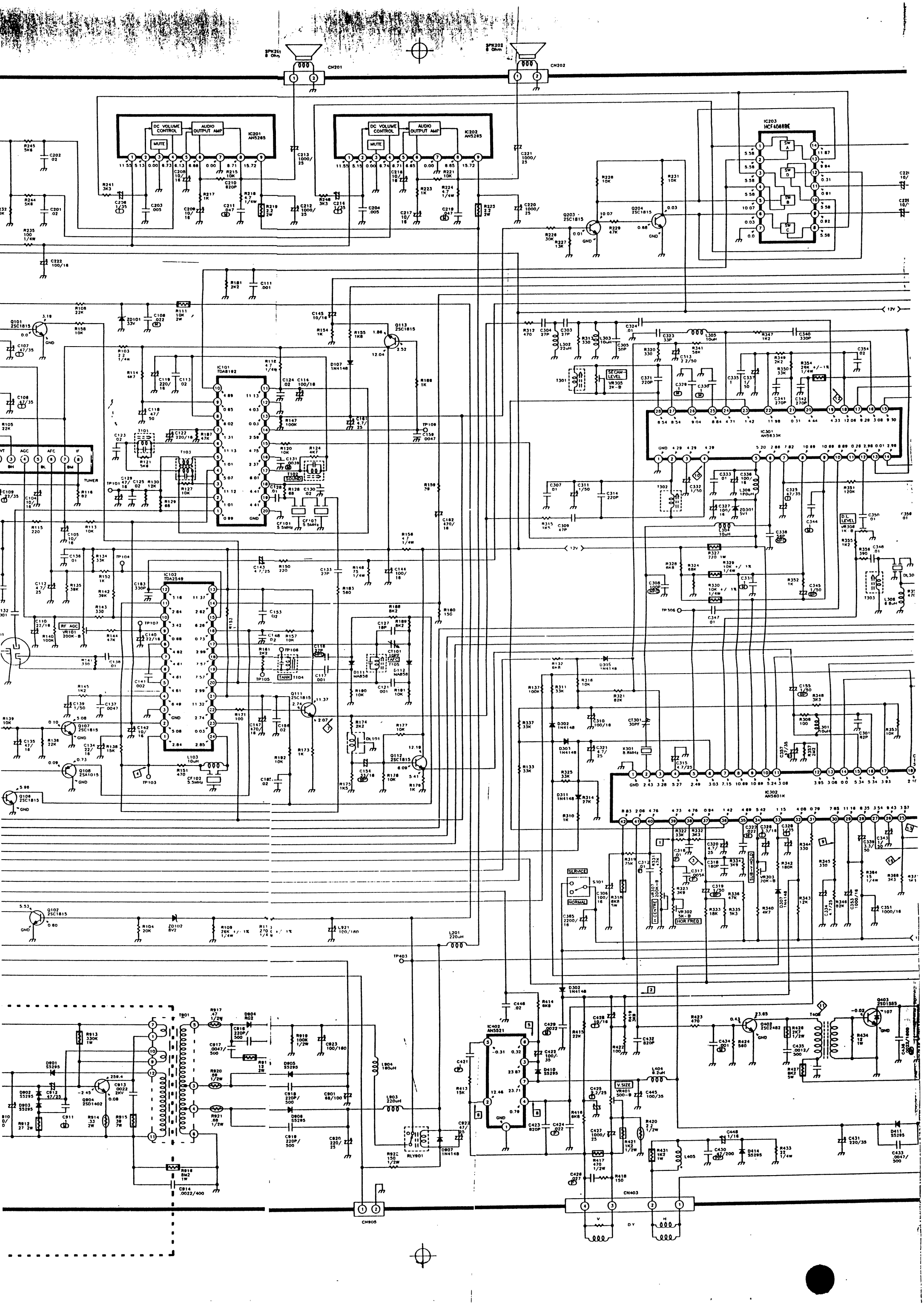
CABINET EXPLODED VIEW



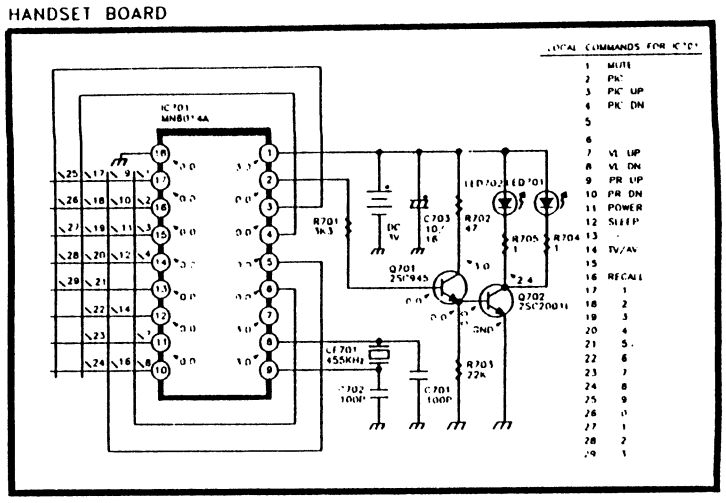
SCHEMETIC DIAGRAM FOR PAL-SECAM-L/L' SYSTEM

MAIN BOARD

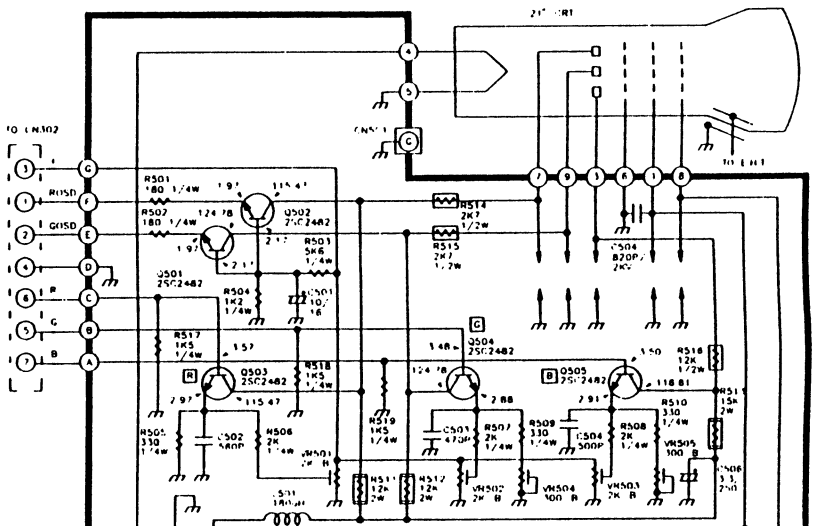


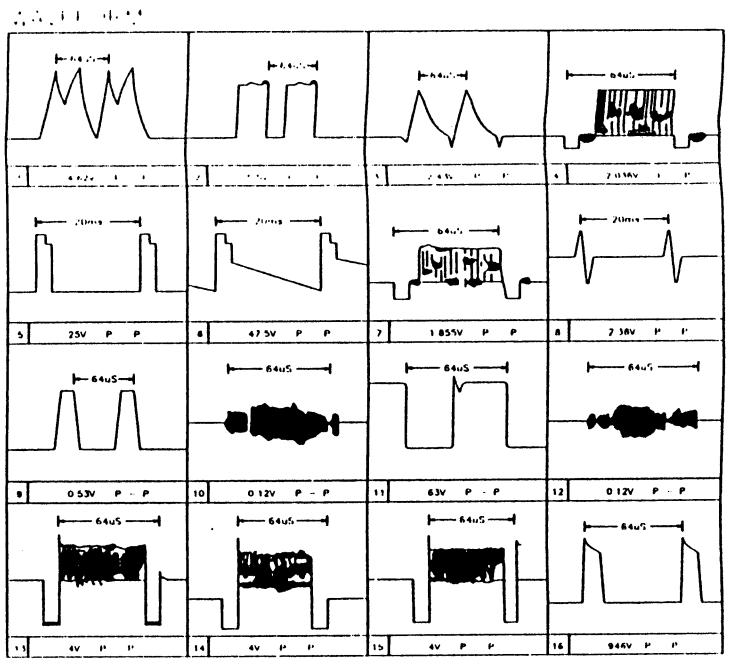

SPK201 8 Ohm
SPK202 8 Ohm
CN201
CN202
IC201 AN5265
IC202 AN5265
DC VOLUME CONTROL
AUDIO OUTPUT AMP
MUTE
IC203 HCF4066BE
SW A
SW B
SW C
SW D
IC101 TDA8192
IC102 TDA2549
IC301 AN5831K
IC302 AN5601K
IC402 AN5521
TUNER
RF AGC VR101 200K-B
SECAM LEVEL VR305 2K-B
DL LEVEL VR306 1K-B
V.SIZE VR401 500-B
H-CENTRE VR307 200K-B
VR302 5K-B HOR FREQ
VR303 20K-B
SUB-CONTRAST
SERVICE
NORMAL
S101
SOUND T102
TANK T104
DL101
RLY901
CF101 5.5MHz
CF102 5.5MHz
CF103 5.5MHz
X301 8.8MHz
CT101 10PF AFC T105
CT301 30PF
T101
T103
T301
T302
T303
T401
T402
T403
T404
TBO1
12V
GND

HANDSET BOARD



CRT BOARD





NOTE :

(1) ALL CAPACITORS ARE IN uF UNLESS OTHERWISE NOTED. ALL CAPACITORS ARE 50WV UNLESS OTHERWISE NOTED.
(2) CAPACITOR NOT SPECIFICALLY DESIGNATED ARE CERAMIC CAPACITORS.
(3) ALL RESISTORS ARE IN OHM 1/4W WATT UNLESS OTHERWISE NOTED.
(4) RESISTOR NOT SPECIFICALLY DESIGNATED ARE CARBON FILM RESISTORS.
(5) DC VOLTAGE ARE MEASURED FROM POINTS INDICATED TO THE CIRCUIT GROUND WITH A DIGITAL MULTIMETER TEST.
(6) WAVEFORMS ARE TAKEN WITH SETTING CONTROLS TO A NORMAL CONDITIONS (COLOR PHILIPS PATTEN)
(7) THIS CIRCUIT DIAGRAM IS SUBJECT TO CHANGE WITHOUT PRIOR NOTICE
(8) ⚠ SAFETY CRITICAL DEVICE.

CIRCUIT SYMBOLS		
RESISTER	CAPACITOR	
NONFLAMMBLE	ELECTROLYTIC	POLYPROPYLENE
FUSEBLE	BI-POLAR ELECTROLYTIC	MYLAR
CEMENT	TANTALUM	
METAL OXIDE	METALUZED POLYESTER	
THERMISTOR	POLYESTER FILM	

KONG WAH VIDEO ENGINEERING LTD	
TITLE: SCHEMATIC DIAGRAM	
MODEL: K-8221 (TF)	SYSTEM: PAL-SECAM-L/L'
DRAW NO: 8221-02	COUNTRY: FRANCE
DATE: MAR 1, 1992	REV NO:

Model : CTV2111

Ref.No.	Description	Pt. No.
	Cabinet Parts List	
1	Front Cabinet Assy	242068
2	PVC Sheet Cover For Tweeter	
3	Speaker Grille R&L	241704
4	Front panel red right	242070
5	Compression Spring Power Knob	
6	Power Knob	241702
7	Front Lens	
8	Door Lock Assy	241819
9	Control Overlay	
10	Front Panel Door	241818
11	Front Panel Left	242069
12	CRT Mounting Bracket	
14	Rubber Ring	
15	CRT A51JAR90X13	241692
16	Clip Degauss Coil	
17	Degauss Coil 21"	241913
18	CRT Mounting Clip	
19	Speaker Bracket	241922
20	Speaker	241690
23	Main PCB Assy	
24	Heat Sink	
26	Heat Sink	
27	Function PCB Assy	
28	Function PCB Mounting Bracket	
30	LED PCB Assy (not a spare part)	
31	Channel PCB Mounting Bracket	
32	Power PCB Assy	
33	Adapter For Power Switch	241971
34	Chassis Bracket	
35	Back Panel Black	242067
36	A/V Cover Sheet	
38	CRT PCB Assy	
39	Back Cabinet	
40	Model No Plate	
41	Antenna Cover Plate	241703
44	Name Badge	

Electrical Patrs List

Ref No.	Description	Pt.No.
	IC	
IC101	IC TDA8192	242064
IC102	IC TDA2549	242062
IC103	IC LA7910	250206
IC201,202	ICAN5265	151705
IC203	IC HCF4066BE	241807
IC301	IC AN5633K	242063
IC302	IC AN5601K	241682
IC402	IC AN5521	241935
IC601	IC MN1220	152595
IC603	IC MN15245KWC	241460
	Transistors	
Q101-104	Tr 2SC1815 Y	170447
106,107		
109-114		
120,121		
203,204		
301,303		
305,602		
604,605		
607,608		
615,901		
903		
Q105	Tr 2SC388ATM 2SC1923R	241461
Q402,501	Tr 2SC2482	241464
-505		
Q403	Tr 2SD1555E 2SD2333	175665
Q108,601	Tr 2SA1015 Y	170453
603		
Q606	Tr 2SC1317R 2SC1213D	200239
	2SC2001L	
Q612	Tr 2SD400F 2SD467C	254930
Q902	Tr 2SB774T 2SA9338	241912
Q904	Tr 2SD1402 2SD1545	241680
	Diodes	
BR901	D 2SBAS60 Bridge Rect.	
D101-103	D IN4148 Rectifier	270754
107,301-		
303.305		
307-311		
603,604		
606-610		
612-617		
907		
D104,105	D MA858	242059
D108,601	D IS1555V	
611		
D410,411	DS5295 G BA157	175453
413,414		
901-903		
905,906		

Ref.No.	Description	Pt.No.
D412	D RU2	241814
D904	D RG2	241815
ZD101	DZ KA33V	241693
ZD102,902	DZ9.1V MA1091-M	809221
ZD301	DZ 5.1V	1422112
ZD401	DZ 12V MA2120	241939
ZD601	DZ 5.6V	240006
ZD602	DZ 30V	175066
ZD901	DZ 8.2V	175764
LED601	LED Red SEL2110R	241471
	Coils	
L102	Coil Fixed 1uH	
L103,301,	Coil Fixed 10uH	
303-305		
404		
L201,202	Coil Fixed 330uH	
L302	Coil Fixed 22uH	
L306,307,	Coil Fixed 180uH	
501		
L308	Coil Fixed 6.8uH	
L405	Coil Fixed 54uH	
L901	Coil Line Filter ELF18D615G	241835
L902	Coil Degauss 21" 89T	241913
l903,904	Coil Choke 160uH	242038
T101,103	Coil IFT 51M7-M R12-L244A	242106
T102	Coil Sound IFT B199CC-A1470EL	242060
T104	Coil Chroma IFT 51M7-M R12-L243A	242104
T105	Coil Video IFT B199KC-A1463EL	241945
T301,302	Coil IFT B199CN-A1541EL	242061
T303	Coil Chroma IFT L-4M7D3	241779
T403	Tx Hori Drive AT-19E-R0710	241671
T404	Tx Flyback CF0341	241691
T901	Tx Switching HL4025B	241672
	Filters	
CF101,103	Cereamic Filter SFE-5.5MB	241726
CF102	Trap Filter TPS-5.5MB	241765
DL101	Delay Line ELT10Z216	241759
DL301	Delay Line YTS-8B2	241812
SA101	Saw Filter 32.7MHz	242057
	Crystals	
X301	CRYSTAL 8.867238MHz	241747
X601	Ceramic resonator 4MHz CSA4.00MG	241511

Electrical Patrs List

Ref.No.	Description	Pt.No.
	Switches	
S201,301	Slide Switch 2P2T 11-11	242065
S401	Power Switch ESB-99957S 01-14	241608
S601,604	Slide Switch 2P2T 10-05	241950
S601,603, 605-609 611,612 614-618	Tact Switch 01-40	240809
	Variable Resistors	
VR101,301 307	VRSF 200K Ω 204541	242001
VR302,602	VRSF 5K Ω 502541	
VR303	VRSF 20K Ω 203541	
VR304	VRot 10KB Ω 103291 25mm	241948
VR305	VRSF 2KΩ 202541	
VR306,901	VRSF 1K Ω 102541	
VR401	VRSF 500 Ω 501321	
VR501,502 504	VRSF 5K Ω 502531	
VR503,505	VRSF 300 Ω 301531	
	Miscellaneous	
CT101	Cap Trimmer 10PF	
CT301	Cap Trimmer 30PF	
	Tuner W/IEC UVE33-F21 Secam	242058
F902	Fuse T3.15A 250V 20mm	175963
RL901	Relay 12V TV-5	241496
TH901 !	PTC Thermister ZPB53BL200C	241506
OPT601	Optical Receiver Module HC-337M	242045
!	CRT A51KQK63X05	241692
!	CRT Socket HPS2171	241689
J001	21 Pin Scart Socket	153030
!	AC Cord W/Plug	242066
	Mica Sheet For Q404	
	Speaker Oval 4"X2075" 8 Ω 5w	241963
	Poly Packing	
	Carton	242073
	User Instructions	242072
	Remote Control Handset	242071
	Battery Cover Handset	

Description	Ref. No.	Pt. No
	Resistors	
	Carbon 1/16w	
1 Ω	R153	
33 Ω	R125	
39 Ω	R159	
68 Ω	R128,129	
75 Ω	R146,303-305	
82 Ω	R116	
100 Ω	R150,171,306,308,361-363,422,614	
150 Ω	R160,418	

Description	Ref. No.	Pt. No
330 Ω	R141,143,313,344,345	
390 Ω	R356,359,375-377	
470 Ω	R126,151,312,358,,365,423	
560 Ω	R183,424,622	
680 Ω	R217,223,650	
1k Ω	R102,123,152,154,163,173,179,182,186 216,222,307,310,340,352,644,647,656 662	
1.2K Ω	R145,347,355,625	
1.5K Ω	R175,315	
1.8K Ω	R155	
2.2.K Ω	R161,181,215,221,349,609,634	
3.3K Ω	R332,335,348,360,368,371,651,657	
3.9K Ω	R323,334,419	
4.7K Ω	R114,124,241,243,606,617,618,660,668 669	
5.6K Ω	R121,122,317,333,619	
6.8K Ω	R132,328,414,416	
8.2K Ω	R168,170,188,189	
10 KΩ	R101,104,113,120,127,131,139,157,158 162,164,165,169,172,176-178,184,185 190-193,228,231,309,316,353,607,624 626,634,642,665-667	
12K Ω	R130,343,366,373,374,610,615	
13K Ω	R227,242	
15K Ω	R138,413	
18K Ω	R649	
22K Ω	R105-107,117,119,136,166,167,180,415 645,648,658	
27K Ω	R314,320	
30K Ω	R226	
33K Ω	R133,134,311,322,325,337,350	
39K Ω	R135,142	
47K Ω	R144,187,229,331,336,602,611,616,623 627,629,635,639,646	
56K Ω	R341,630	
68K Ω	R324	
75K Ω	R319	
82K Ω	R321,346	
100K Ω	R137,140,147,661	
120K Ω	R351	
180K Ω	R115,238,239	
1M Ω	R637,659	
2.2M Ω	R357	
	Carbon 1/4w	
2.2 Ω	R103,218,224	
4.7 Ω	R118,156	
15Ω	R364	
27 Ω	R301	
47 Ω	R302	
100 Ω	R235	

Electrical Patrs List

Description	Ref. No.	Pt. No
100 Ω	R235	
180 Ω	R502,503	
330 Ω	R512,515,905	
470 Ω	R112,504	
1.2K Ω	R505	
1.8K Ω	R907	
2.2K Ω	R653	
2.4K Ω	R174	
3.3K Ω	R506,511,514,904	
5.6K Ω	R507	
6.8K Ω	R903,909	
8.2K Ω	R906	
10K Ω	R908	
22K Ω	R433	
	Carbon 1/2w	
150 Ω	R601,922	
10K Ω	R430	
22KΩ	R432	
100K Ω	R919	
	Flame Proof Carbon Film	
4.7 Ω 1/2W	R420	**241742**
470 Ω 1/2W	R417	241520
680 Ω 1/2W	R421	242075
2.7K Ω 1/2W	R426,509,510,516	241522
4.7K Ω 1/4W	R910	
100KΩ 1/2W	R428	**241714**
	Metal Oxide	
2.2 Ω 2W	R902	241738
5.6 Ω 3W	R425	241744
10 Ω 2W	R219,255	271446
12 Ω 1W	R911	241596
12Ω 2W	R918	241731
27 Ω 2W	R912	241598
39 Ω 7W	R915	241597
220Ω 1W	R327,431	177363
6.8K Ω 5W	R318,427	242020
10KΩ 1/4W	R329,330	241857
10K Ω 2W	R111	241729
15KΩ 2W	R508,513,517	241716

Description	Ref. No.	Pt. No
26K Ω 1/4W	R109,354	241739
270K Ω 1/4W	R110	241740
330K Ω 1W	R913	241720
8.2M Ω 1W	R916	241602
	Cement	
4.7 Ω 5W	R901	176418
	Fuse	
0.33 Ω 2W	R914	241741
0.68 Ω 1/2W	R920,921	241513
0.68 Ω 1W	R917	241805
1.5 Ω 2W	R501	241717
	Capacitors	
	Ceramic	
18PF	C127,158	
27PF	C116,133,157,303,304	
33PF	C323	
47PF	C309	
50PF	C305	
56PF	C338	
100PF	C308,616,622,623,634,637	
120PF	C301	
180PF	C318	
220PF	C314,361,362,369,370,371,649	
220PFD ! 500V	C916,918,919	
270PF	C341,342,505	
330PF	C163,340,363,364,366,367,501,503	
470PF	C368,632	
560PF	C617,620,625,628	
680PF	C210,218	
820PF	C423,432	
820PF 2KV	C504	
1200PF ! 500V	C435	
0.001μF	C111,117,121,132,149,152,614,621	
0.001μF ! 2KV	C467	
0.002μF	C113,123-125,130,141,148,153,156,165 168,201,202,354,446,653,604	
0.0022μF ! 400V	C914	
0.0022μF ! 2KV	C913	
0.0047μF	C137,159	

Electrical Patrs List

Description	Ref. No.	Pt. No
0.0047µF ! 500V	C433,441,905,906,908,917	
0.01µF	C115,120,126,128,136,138,224,225,307 324,333,347,348,350,356,606,608,610 615,619,630	
0.02µF	C150,151	
0.1µF	C335,639,640	
	Electrolytic	
0.47µF 50V	C118	
1µF 50V	C139,227,311,332,337,343,346,349	
1µF 50V NP	C155,319,345	
1µF 160V	C448	
2.2µF 50V	C207,313	
3.3µF 50V	C339,358-360	
4.7µF 25V	C112,161,315,320,321,334,641	
10µF 16V	C102-105,142,145,166,167,208,209,216 217,502,605,612,613,654	
10µF 50V	C910	
10µF 250V !	C442	
22µF 16V	C110,134,140	
22µF 160V !	C439	
33µF 16V	C631	
33µF 16V NP	C154	
47µF 16V	C129,135,352,609	
47µF 25V	C912,922	
100µF 16V	C114,144,306,310,327,336,611,624,636	
100µF 35V	C422,445	
100µF 160V !	C921,923	
100µF 400V !	C907	
220µF 16V	C119,122	
220µF 35V	C431	
330µF 50V	C901	
470µF 16V	C147,162,355	
1000µF 1,6V	C351,353	
1000µF 25V	C212,213,220,221,427	
2200µF 16V	C365	
2200µF 25V	C440,920	

Description	Ref. No.	Pt. No
	Tantelum	
0.22µF 35V	C109	
0.47µF 35V	C106,107,325,357	
1µF 35V	C206,214,328	
2.2µF 25V	C425	
3.3µF 25V	C326	
10µF 16V	C428	
	Mylar	
0.001µF	C434	
0.0022µF	C429	
0.0039µF	C131	
0.022µF	C108,322	
0.027µF	C426	
0.033µF	C909	
0.1µF	C143,329-331,344,911	
0.39µF	C211,219	
	Poly	
0.0056µF	C317	
0.01µF	C312,316	
0.022µF	C424	
0.047µF	C638	
0.1µF	C421,443	
	Polypropylene	
0.36µF ! 200V	C430	
0.047µF ! 200V	C456	
	Metalpoly.	
0.0022µF ! 1.6KV	C436	152578
0.0033µF ! 1.6KV	C438	273711
0.47µF ! 250C	C902,904	253611

Amstrad reserves the right to supply selectivr components